

2005 Virginia Spring Gobbler Season Survey

by

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Abstract: An annual survey of spring gobbler hunters in Virginia was conducted to monitor turkey population trends and hunter satisfactions. Cooperators ($n = 345$) reported data on 12,783 hours of hunting during 4,303 hunts in 89 Virginia counties. Cooperators heard, called, and saw similar numbers of gobblers in the 2005 season compared to 2004. Gobbling rates were similar between counties east of the Blue Ridge Mountains (EBR) than west (WBR). Gobbling peaked during the second week of the season. Gobbling patterns were generally similar between areas EBR and WBR. Hunter success rates were higher in early April. Cooperators' opinions about the 2005 season were generally favorable with ratings of good (32%) or excellent (19%) reported. However, cooperator opinions about the 2004 and 2005 seasons appeared lower than recent years. Cooperators hunting on private lands heard more birds than those hunting on public lands. The number of hens flushed per hunt suggested peak nest incubation began during the week of April 25, 2005. Many hunters (37%) reported some type of interference during the season. Similar gobbling rates and cooperator success between 2004 and 2005 seasons suggest little change in the turkey population. These results agree with the statewide 2004 and 2005 spring gobbler harvest data.

Spring gobbler hunting in Virginia is a popular sport with over 70,000 hunters hunting nearly 340,000 days in 2002 (Jagnow and Steffen 2005). The number of spring gobbler hunters has increased nearly 70% since 1993 estimates of 43,005 hunters (Wright 1995). To gain better information on the status of Virginia's wild turkey population as well as information on characteristics, attitudes, and preferences of wild turkey hunters in Virginia, an annual spring gobbler survey has been conducted since 1987. Results from these surveys help evaluate wild turkey season length and bag limits, which are the primary wildlife management tools used to effect desired population goals.

METHODS

The survey was a self-administered mail-back questionnaire distributed to Virginia residents who were members of the National Wild Turkey Federation and to previous survey respondents ($n = 352$). The 2-part survey requested information from daily hunts and opinions and other information (Appendix B). The survey was distributed prior to the season. Cooperators were asked to record hunting information through the season and return their survey at the end of the season. Follow-up mailings were not attempted. In most cases, standard statistical methods were used to

calculate means and standard errors (mean \pm SE). Standard errors for variables expressed on a per hour and per hunt basis (e.g., gobbling/hr, hens seen/hunt) were calculated using ratio-estimators (Cochran 1977). Means and standard errors were calculated by post-stratified methods for the following variables: hunters seen, hunts with interference, and dogs observed.

Because it was believed that daily variation in weather could have an effect on gobbling, the daily gobbling rates were calculated as 3-day moving averages. The moving average of gobblers heard per 100 hours of hunting (MG_t) on day t was calculated using:

$$\text{Moving Gobbling (MG)}_t = (G_{t-1} + G_t + G_{t+1}) / 3$$

where, G_t = ratio estimate of gobblers heard per 100 hours of hunting on day t . The moving average of gobblers killed per 100 hours of hunting (MK) was calculated with gobblers killed on day t using:

$$\text{Moving Kill (MK)}_t = (K_{t-1} + K_t + K_{t+1}) / 3$$

where, K_t = ratio estimate of gobblers killed per 100 hours of hunting on day t .

The 2005 regular season began on Saturday, April 9. The weekly time periods were considered Monday through Saturday. In addition to opening day, the weekly time periods were: Week 1, April 11–16; Week 2, April 18–23; Week 3, April 25–30; Week 4, May 2–7; and Week 5, May 9–14. Region boundaries were based on climatological and physiographic characteristics.

During the survey history, cooperators noted that they frequently hunt with others and they suggested that we include data on the hunting success of their partners. Therefore, beginning in 1998, cooperators were asked to

report information on their hunting partners' activities, specifically, if their partners killed a gobble on one of their hunts.

RESULTS AND DISCUSSION

Hunter Statistics

Effort. – Questionnaires were received from 375 individuals and daily records were received from 345 individuals. Cooperators ($n = 345$) reported data on 12,783 hours of hunting during 4,303 hunts in 89 counties. As in previous years, cooperators averaged hunting about 12 days during the season although several cooperators hunted every day of the season. Hunters averaged hunting just over 3 hours per day (Table 1). Little difference has been reported in the time hunters are afield each day among years of the survey. Hunts appeared to decline in length as the season progressed (Table 2). Cooperators scouted an average of 4.3 days prior to the season (Table 1).

Afternoon Hunting. – Cooperators took advantage of afternoon hunting during the last 2 weeks of the season with about 20% of hunts lasting until the afternoon hours. Some (7%) began hunting in the afternoons. Gobbling rates of those hunts that began in the afternoon in the last 2 weeks of the season were lower (0.09 gobblers heard/hr) than those that began before noon (0.42 gobblers/heard hr).

Lands Hunted. – About 91% of Virginia land is privately owned. Cooperators hunted primarily on land that was owned privately (83%) followed by federal (15%), and state (2%) owned land. The disproportionate use of public land (9% available vs. 17% used) suggested that publicly owned lands offer important opportunities for hunters in Virginia.

Decoys. – Decoys were used by 69% of cooperators in the 2005 survey (Table 1). Decoy use has increased since the survey began in 1987 until 2004 when there was a slight decline in the percentage of cooperators using decoys (Table 1).

Hunter Success. – During the 2005 season cooperators heard, saw, called in, and killed similar numbers of birds per season compared to 2004 (Table 3). Hunter success in both 2004 and 2005 seasons appeared lower than 2001-2003 seasons. Cooperators averaged harvesting 0.92 birds in the spring season, which was comparable to 2004 but lower than recent years (Table 3). Cooperators or their partners killed 7% of birds heard in 2005, which is comparable to the 6% rate in 2004. Approximately 29% of gobblers called-in were successfully harvested by cooperators or their partners (Table 4). Crippling losses were only 3.8% in 2004, this is the lowest crippling rate reported in the survey. Crippling losses have ranged from 3.8 to 7.9 percent during the survey (Table 4). Thirty yards appears to be an important range for hunters to recognize as birds shot within that range were generally killed whereas beyond 30 yards were more likely to be missed or crippled. The mean shotgun distance reported for kills was 27.9 yards. Average crippling and missing distances with shotguns were 34.6 and 35.5 yards, respectively (Table 4). Rifle hunters averaged killing birds at 62 yards.

Most birds (52%) were taken by 8:00 A. M. (Table 5). Only 4 percent of the harvest was taken between noon and sunset during the last 2 weeks of the season

Daily harvest rates (mk/100hr) peaked during early April (Fig. 1). Harvest rates appeared to increase later in the season,

beginning about May 8, 2005. This late peak generally coincided with the time frame more hens were flushed off nests (Table 14) and may indicate that nest incubation was peaking and gobblers were more vulnerable to calling.

Cooperators reported the age distribution of gobblers harvested was: 15%, 1-year-old; 28%, 2-year-old; 40% 3-year-old; and 17%, 4-years and older (Table 6). Over the course of the survey the “jake” (1-year-old) kill has averaged 13% of the total spring kill. The range of “jake” harvest has been as low as 7% and as high as 22%. The 2005 “jake” kill was slightly above average and was higher than recent years (Table 6). Many cooperators (58%) indicated they intentionally pass up “jakes” for adult birds.

Most gobblers that were killed by cooperators were alone (46%) or were with other gobblers (24%). Some of the harvested gobblers were with hens (15%) while others (15%) were with both gobblers and hens.

The average weight reported by cooperators was 18.9 pounds. The heaviest bird reported weighed 24.5 pounds. We noticed a change in weight

Average spur length was 0.94 inches. We did notice an apparent increase in average spur length during the last week of the season. Average spur length by week was: 0.94, 0.93, 0.93, 0.95, and 0.98 for weeks 1-5, respectively. This may reflect some increased vulnerability of older gobblers at the end of the season.

Overall cooperators' opinions about the 2005 season were better than 2004 but lower than usual. Only 19% of cooperators rated the season excellent. Excellent ratings have ranged from 17 to 40% of previous survey rankings. While the excellent rating was low, the poor rating was up (27%). The range of poor ratings was between 5 and 27% (Table 7).

The 2005 season was the second season

for the special youth spring gobbler hunt before the regular season. Approximately 14% of cooperators hunted with young hunters on the youth day. Some cooperators continued to help others during the season and guided either young (15%) or adult hunters (36%).

Other Species Seen. – Cooperators reported seeing a total of 32 bears and 73 coyotes during the season. These totals are comparable to 2004 observations where 25 bears and 70 coyotes were reported.

Gobbling Statistics

State, Regional. – On a statewide basis, hunters heard 0.51 gobblers per hour (Table 8) and 1.70 gobblers per hunt in 2005 (Table 9). Compared to last year, the average number of gobblers heard per hour increased 4% and the average number of gobblers heard per hunt did not change. If changes in gobbling rates reflect changes in population levels, 2005 populations appear similar to 2004. This conclusion is supported by the statewide harvest reported at game check stations, which increased 0.1%. Other research has shown that total harvest is a better indicator of population levels and that gobbling rates can be affected by a number of variables. Based on either index, harvest or gobbling, the turkey population appears to have changed very little in 2005 compared to 2004. The turkey population appears to have been stable during the period from 2001 through 2003. Poor reproduction during this time-frame has likely contributed to the lack of growth in the population.

For past 8 years the West Piedmont Region has had the highest gobbling rate per hour among regions. While the West Piedmont region was again lead the state in 2005, the lead was shared with the Southwest Region (0.57

gobblers heard/hr). Third place went to the Tidewater region (Table 8). There was little difference between the East Piedmont and Northern region while the lowest rate was reported in the Central Mountain Region (Table 8).

Chronological. – Gobbling activity is thought to have 2 peak periods through the season. The first peak comes as gobblers attempt to attract hens. The first peak generally occurs in March. Gobbling declines in late March and early April during peak mating. A second peak may occur in mid-late April as hens leave the gobblers to begin laying eggs and incubating nests.

Gobbling activity was highest during the second week of the season (Table 10). Gobbling declined after the second week and remained fairly constant through the balance of the season. The highest daily gobbling rates were on April 19 and 20 (Fig. 1). Gobbling patterns were generally similar between areas East and West of the Blue Ridge Mountains (Fig. 2) and by region (Table 10).

Intensity. – We grouped gobbling intensity into 3 categories (no gobbling, poor gobbling, or fair-good). The best hunting conditions appeared during the second week of the season with the highest positive conditions (fair-good gobbling) and the lowest negative conditions (no gobbling). Hunts with no gobbling tended to increase as the season progressed.

Land Type. – In 2005, individuals hunting on private lands (0.53 ± 0.01 , $n = 3,552$) heard more birds than those hunting on federal (0.41 ± 0.02 , $n = 643$) or state lands (0.29 ± 0.04 , $n = 97$). These results agree with previous survey results where private land gobbling rates have been higher than public-owned lands.

Hen Statistics

Cooperators averaged hearing 0.69, seeing 0.95, and calling in 0.24 hens per hunt during the 2005 season (Table 11). These statistics suggest that the turkey population has increased slightly in recent years. These results differ from the gobbler statistics that suggested no change in the turkey population.

Through the survey history the average number of hens seen and called in per hunt typically declines by week of the season (Tables 12 and 13). The 2005 season was atypical in that the number of hens seen increased during week 5 of the season. Some of this increase may be attributed to cooperators taking advantage of hunting in the afternoons. However, only 7 percent of hunts began in the afternoon while 20 percent ended in the afternoon. In three years of the survey, (1987, 1992, and 1998) the number of hens seen increased at the end of the season (Table 13). The increase in hen observation rates at the end of the season may indicate poor nest success rates if hens lost their nests and were more visible to hunters. Reproductive rates, based on fall feather samples, were below average during 1992 and 1998 seasons. While observations of hens declined steadily through the season, which may indicate normal nesting patterns, another potential problem was seen in the sheer number of females seen at the end of the gobbler season compared to the number at the beginning. Theoretically, the ideal scenario would be for cooperators to report seeing record numbers of females early in the season and a smaller percentage of those birds at the end of the season. Their disappearance would indicate nesting. In most good reproductive years we've noticed this type of scenario, with hen observation rates in the last week representing

50% or less of the observations seen in the first week. From 2001 through 2004 cooperators reported seeing more than half as many hens during the last week of the season as they did during the first week. Fortunately, in 2004 the percentage of hens seen at the end of the season was less than 40% of the first week. These data (fewer hens seen at end of the season) may suggest more successful nesting efforts. Reproductive success measured from feathers collected at game check stations verified above average recruitment in 2004.

The number of hens flushed per 100 hours increased sharply during the third week of (25 April – 30 April; Table 14) of the 2005 season, which may be indicative of peak incubation. A total of 78 hens were flushed from their nests by cooperators during 4,303 hunts in the 2005 season. On average, a hen was flushed on 1.8 percent of hunts or every 55 hunts.

Interference

Hunters. – Many (37%) cooperators experienced some type of interference from other hunters in 2005 (Table 15). The rate of interference reported by hunters appears to be relatively stable over the past 6 years, ranging between 35 and 40% (Table 15). Recent rates appear lower than surveys before 1993 where more than half of cooperators reported interference (Table 15).

On average, cooperators reported seeing 4.0 (Table 15) other hunters during the 2005 season. The most frequently reported (mode) number was 1. The median number of hunters seen was 2. The highest number of hunters reported seen by a cooperator was 40 over the course of the season.

Dogs. – About 40% of cooperators reported

seeing free ranging dogs (Table 16). There has been little change in dog disturbance rates over the past several years (Table 16). Free ranging dogs are a concern as a potential predator for wild turkey and other ground-nesting birds. Several research projects in the Southeast have identified dogs as a major predator of nesting hens and poults.

Violations

About 1 out of 7 cooperators (14%) reported seeing a game law violation in 2005. This level of violations is comparable to last year but is much lower than 2003 where 20% of cooperators reported violations. As in previous years, trespassing led all violations (Table 17). The illegal killing of hens, either intentionally or mistakenly identified as a gobbler, was perhaps of greatest concern because of the potential effects on population status and growth. We have found a 6% illegal mortality rate of female turkeys in Virginia during a study of radio marked between 1989 and 1994.

Remarks

Cooperators provided a variety of comments on their observations, preferences and opinions on the 2005 season. A summary of these remarks is included in Appendix A. Remarks were not included if the name and address were not included on the survey.

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LITERATURE CITED

Jagnow, C. P. and D. E. Steffen. 2005. Virginia Survey of hunter harvest, effort and attitudes 2004-05. Virginia Department of Game and Inland Fisheries, Wildlife Resource Bulletin No. 05-7, Richmond, Virginia, USA.

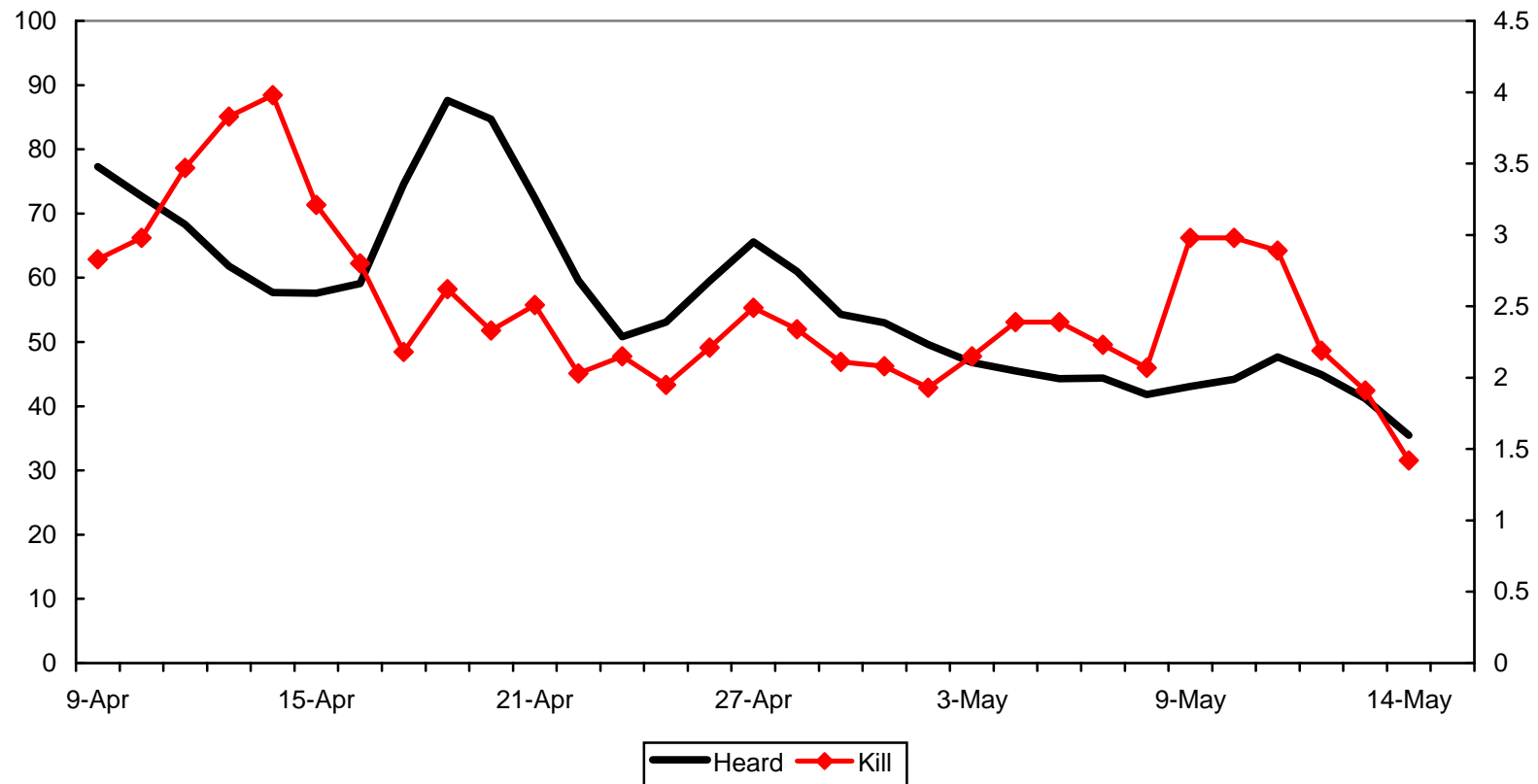


Figure 1. Statewide gobbling and harvest rates by day in Virginia, 2005.

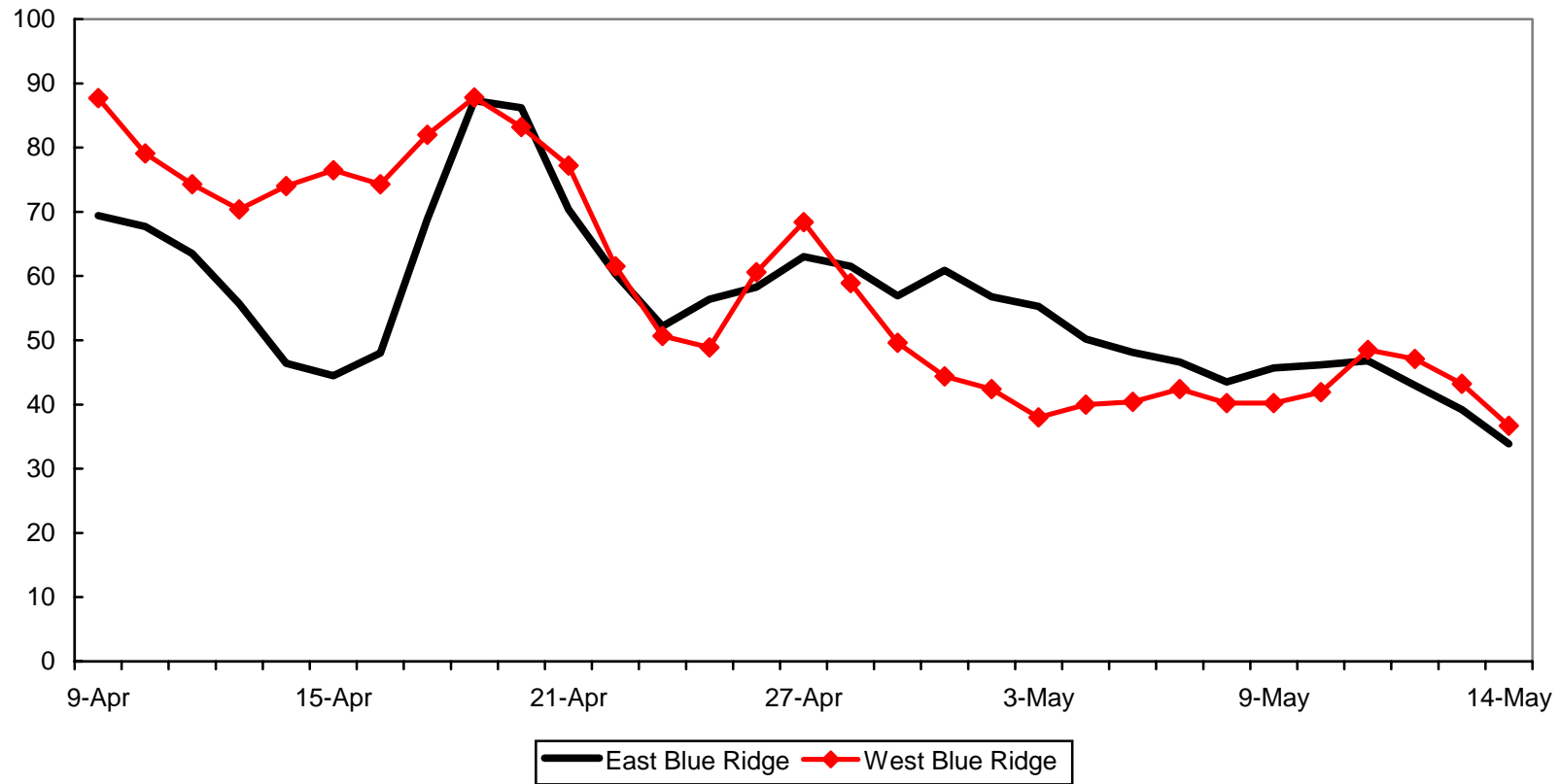


Figure 2. Daily gobbling rates by region in Virginia, 2005.

Percent of Hunts

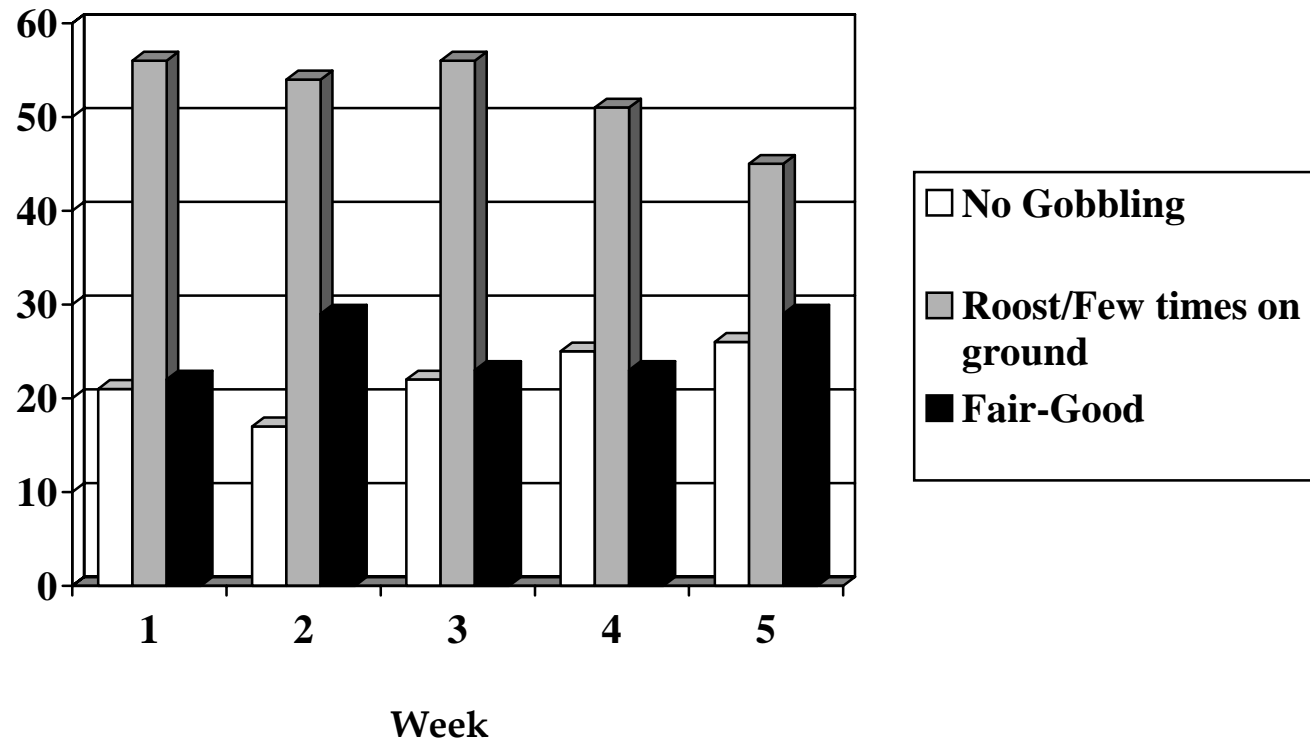


Figure 3. Gobbling intensity by week in Virginia, 2005.

Table 1. Hunting effort, scouting, and decoy use by cooperating wild turkey hunters in Virginia.

Year	Hunters (<i>n</i>)	Hunting Days (<i>n</i>)	Hunts/Season	Hours/Day	Scouting Days/ Season	% Using Decoys
1987	133	1,364	11.5	3.2		15
1988	230	2,447	13.7	3.2		7
1989	241	2,622	13	3.1		15
1990	303	3,703	12.9	3.3		18
1991	408	4,459	10.9 \pm 0.3	3.2 \pm 0.02		15
1992	446	5,031	11.3 \pm 0.3	3.2 \pm 0.03		25
1993	369	4,316	11.7 \pm 0.4	3.2 \pm 0.02		36
1994	341	4,018	12.0 \pm 0.4	3.2 \pm 0.03	4.7 \pm 0.3	46
1995	401	4,678	11.7 \pm 0.4	3.3 \pm 0.03	6.7 \pm 1.1	46
1996	461	5,502	11.7 \pm 0.3	3.2 \pm 0.02	5.1 \pm 0.3	56
1997	486	5,610	11.5 \pm 0.3	3.3 \pm 0.02	5.0 \pm 0.2	60
1998	455	5,085	11.2 \pm 0.3	3.3 \pm 0.02	5.4 \pm 0.3	61
1999	490	5,704	11.6 \pm 0.3	3.3 \pm 0.02	5.1 \pm 0.3	63
2000	441	5,655	12.8 \pm 0.3	3.3 \pm 0.02	5.0 \pm 0.3	65
2001	418	5,368	12.8 \pm 0.4	3.3 \pm 0.02	4.9 \pm 0.3	69
2002	380	4,726	12.1 \pm 0.3	3.4 \pm 0.02	5.0 \pm 0.3	71
2003	355	4,545	12.8 \pm 0.4	3.3 \pm 0.02	4.6 \pm 0.3	72
2004	352	4,352	12.5 \pm 0.4	3.4 \pm 0.02	4.3 \pm 0.3	66
2005	345	4,303	12.9 \pm 0.5	3.4 \pm 0.03	4.3 \pm 0.2	69

Table 2. Hunting effort by week for cooperating wild turkey hunters in Virginia.

Year	Day 1	Hours/Hunt \pm SE <i>n</i> (Hunts)				
		Week				
		1	2	3	4	5
1994	3.84 \pm 0.09 266	3.33 \pm 0.05 1,115	3.15 \pm 0.05 879	3.02 \pm 0.06 587	3.12 \pm 0.06 625	3.20 \pm 0.08 542
1995	3.96 \pm 0.08 344	3.37 \pm 0.05 1,363	3.22 \pm 0.05 1,018	3.15 \pm 0.05 700	3.14 \pm 0.06 691	3.04 \pm 0.06 561
1996	3.93 \pm 0.07 378	3.31 \pm 0.04 1,458	3.16 \pm 0.04 1,181	3.17 \pm 0.05 978	3.09 \pm 0.06 822	3.17 \pm 0.06 670
1997	3.33 \pm 0.07 400	3.38 \pm 0.04 1,467	3.35 \pm 0.04 1,128	3.10 \pm 0.05 942	3.15 \pm 0.05 848	3.27 \pm 0.05 799
1998	3.89 \pm 0.08 394	3.43 \pm 0.04 1,480	3.12 \pm 0.05 1,101	3.10 \pm 0.05 808	3.14 \pm 0.06 716	2.98 \pm 0.06 597
2000	3.74 \pm 0.07 363	3.45 \pm 0.04 1,392	3.31 \pm 0.04 1,087	3.40 \pm 0.05 999	3.24 \pm 0.06 975	3.07 \pm 0.06 829
2001	4.00 \pm 0.08 363	3.48 \pm 0.04 1,348	3.34 \pm 0.05 1,136	3.27 \pm 0.05 1,004	3.22 \pm 0.05 866	3.08 \pm 0.06 639
2002	4.00 \pm 0.08 324	3.47 \pm 0.04 1,385	3.46 \pm 0.05 909	3.29 \pm 0.05 811	3.28 \pm 0.06 732	3.09 \pm 0.06 547
2003	3.85 \pm 0.08 293	3.38 \pm 0.04 1,172	3.35 \pm 0.06 1,004	3.29 \pm 0.05 855	3.19 \pm 0.06 600	3.18 \pm 0.06 619
2004	3.98 \pm 0.04 308	3.40 \pm 0.02 1,013	3.38 \pm 0.02 975	3.20 \pm 0.02 748	3.47 \pm 0.02 661	3.55 \pm 0.02 603
2005	3.75 \pm 0.09 278	3.24 \pm 0.05 894	3.16 \pm 0.05 795	3.10 \pm 0.07 591	3.57 \pm 0.01 688	3.50 \pm 0.01 617

Table 3. Season gobbler statistics reported by cooperating wild turkey hunters in Virginia.

Year	Gobblers Heard	Gobblers Called	Gobblers Seen	Gobblers Killed	Gobblers Crippled	Gobblers Missed
1988	12.4	2.9	4.6	1.0	0.06	0.4
1989	16.8	3.4	4.6	1.1	0.04	0.3
1990	15.6	3.2	4.6	0.9	0.05	0.3
1991	13.4 \pm 0.6	3.0 \pm 0.2	4.6 \pm 0.03	0.8 \pm 0.05	0.07 \pm 0.01	0.30 \pm 0.03
1992	16.3 \pm 0.7	3.6 \pm 0.2	5.4 \pm 0.3	0.8 \pm 0.04	0.05 \pm 0.01	0.30 \pm 0.04
1993	16.0 \pm 0.8	3.3 \pm 0.2	4.9 \pm 0.3	0.7 \pm 0.04	0.05 \pm 0.01	0.30 \pm 0.03
1994	14.6 \pm 0.7	3.5 \pm 0.2	5.8 \pm 0.4	0.72 \pm 0.04	0.04 \pm 0.01	0.29 \pm 0.03
1995	20.1 \pm 0.8	4.5 \pm 0.2	6.6 \pm 0.3	0.93 \pm 0.04	0.07 \pm 0.01	0.33 \pm 0.03
1996	20.1 \pm 0.8	5.0 \pm 0.2	7.7 \pm 0.4	0.91 \pm 0.05	0.05 \pm 0.01	0.33 \pm 0.03
1997	21.7 \pm 0.8	4.7 \pm 0.2	7.7 \pm 0.4	0.87 \pm 0.04	0.04 \pm 0.01	0.30 \pm 0.03
1998	19.4 \pm 0.8	4.6 \pm 0.2	7.4 \pm 0.3	0.84 \pm 0.04	0.05 \pm 0.01	0.38 \pm 0.03
1999	20.6 \pm 0.8	2 \pm 0.2	.2 \pm 0.3	0.81 \pm 0.04	0.07 \pm 0.01	0.33 \pm 0.03
2000	22.0 \pm 0.9	4.5 \pm 0.2	7.9 \pm 0.4	0.87 \pm 0.04	0.06 \pm 0.01	0.35 \pm 0.03
2001	26.7 \pm 1.1	5.7 \pm 0.3	9.1 \pm 0.5	1.04 \pm 0.05	0.06 \pm 0.01	0.35 \pm 0.03
2002	27.8 \pm 1.0	5.1 \pm 0.3	8.8 \pm 0.5	1.00 \pm 0.05	0.06 \pm 0.01	0.45 \pm 0.04
2003	25.1 \pm 1.1	5.4 \pm 0.4	8.7 \pm 0.6	1.01 \pm 0.05	0.06 \pm 0.01	0.40 \pm 0.04
2004	21.1 \pm 0.9	4.2 \pm 0.3	8.2 \pm 0.6	0.88 \pm 0.05	0.04 \pm 0.01	0.20 \pm 0.02
2005	21.3 \pm 1.0	5.0 \pm 0.3	9.0 \pm 0.5	0.92 \pm 0.05	0.03 \pm 0.01	0.31 \pm 0.04

Table 4. Shot distances and harvest success of cooperating hunters in Virginia.

Year	Shotgun Distance Killed (Yd) ^a	Shotgun Distance Missed (Yd) ^a	Shotgun Distance Crippled (Yd) ^a	% Called in Killed – Cooperator ^b	% Called in Killed- Cooperator & Partner ^b	% Crippling Loss ^b All weapons
1992	27.6 ± 0.6 (326)	32.3 ± 1.1 (99)	37.1 ± 2.5 (15)	21		5.7
1993	26.5 ± 0.6 (246)	35.5 ± 1.3 (81)	31.6 ± 2.0 (15)	22		7.2
1994	26.6 ± 0.6 (239)	33.9 ± 1.2 (64)	35.7 ± 2.5 (13)	20		5.0
1995	26.5 ± 0.5 (362)	32.9 ± 1.1 (103)	33.5 ± 2.2 (26)	20		6.7
1996	27.1 ± 0.5 (398)	34.5 ± 0.9 (115)	35.9 ± 2.0 (24)	18		5.6
1997	26.1 ± 0.5 (405)	34.4 ± 1.0 (107)	37.6 ± 0.3 (16)	18		3.9
1998	27.6 ± 0.4 (411)	33.8 ± 1.2 (104)	34.9 ± 1.9 (18)	18	30	5.3
1999	26.9 ± 0.5 (418)	36.1 ± 1.4 (92)	29.2 ± 3.8 (16)	19	30	7.9
2000	27.6 ± 0.7 (405)	34.2 ± 1.2 (87)	31.5 ± 2.5 (19)	19	29	6.3
2001	28.4 ± 0.8 (468)	33.7 ± 1.2 (72)	35.1 ± 2.1 (18)	18	28	5.8
2002	29.4 ± 0.8 (383)	36.0 ± 1.2 (88)	35.3 ± 2.5 (20)	20	30	5.4
2003	28.9 ± 0.9 (380)	35.3 ± 1.4 (83)	32.1 ± 1.8 (14)	19	30	5.5
2004	28.9 ± 0.9 (315)	34.8 ± 1.6 (51)	35.7 ± 4.2 (9)	21	30	4.0
2005	27.9 ± 0.6 (306)	35.5 ± 1.2 (78)	34.6 ± 2.8 (10)	23	29	3.8

^a Distance variables are calculated from End-of-Season Questionnaire.^b Percent called and crippling are calculated from daily hunt records.

Table 5. Percent of wild turkey harvest by hour for cooperating wild turkey hunters in Virginia.

Year	Time Begin Time End							<i>n</i>
	06:00 06:59	07:00 07:59	08:00 08:59	09:00 09:59	10:00 10:59	11:00 11:59	12:00 Sunset	
1998	22	33	18	12	9	5		559
1999	26	31	18	12	8	5		585
2000	22	36	17	12	8	6		541
2001	25	30	19	11	8	7		579
2002	25	30	17	12	7	8		520
2003	28	31	18	11	8	4		501
2004*	26	37	15	11	7	5		397
2005	23	29	18	12	9	5	4	423

* Only included first 3-weeks of 2004 season.

Table 6. Age distribution (%) of gobblers harvested as reported by cooperating wild turkey hunters in Virginia.

Year	Age (Years)				<i>n</i> ^a
	1	2	3	4+	
1991	16	37	40	7	328
1992	18	29	37	15	347
1993	10	47	35	7	267
1994	22	33	29	15	250
1995	15	35	40	10	380
1996	13	39	40	8	409
1997	8	42	41	9	424
1998	12	37	38	14	433
1999	16	35	35	15	496
2000	13	34	38	15	429
2001	13	32	38	17	482
2002	9	36	41	14	417
2003	7	37	42	14	402
2004	11	34	37	17	316
2005	15	28	40	17	319

^a*n* = reported gobbler harvest.

Table 7. Percent of cooperators rating season in Virginia by category.

Year	Excellent	Good	Fair	Poor	No Opinion
1990	23	30	25	21	1
1991	23	33	26	17	1
1992	17	50	29	5	1
1993	22	30	29	19	1
1994	25	29	22	22	1
1995	40	34	17	9	1
1996	36	32	21	12	1
1997	37	30	19	13	1
1998	29	30	24	17	1
1999	29	29	24	16	2
2000	26	31	24	17	2
2001	36	32	19	12	1
2002	25	34	24	14	2
2003	23	30	27	19	1
2004	14	34	23	23	2
2005	19	32	20	27	1

Table 8. Region gobbling by hour for cooperating wild turkey hunters in Virginia.

Year	Gobblers Heard / Hour \pm SE (<i>n</i>)						
	Tidewater	Southwest	Western Piedmont	Eastern Piedmont	Central Mountain	Northern	State
1994	0.42 \pm 0.02 (897)	0.32 \pm 0.01 (643)	0.32 \pm 0.01 (590)	0.42 \pm 0.02 (758)	0.37 \pm 0.02 (741)	0.41 \pm 0.03 (333)	0.38 \pm 0.01 (4,018)
1995	0.62 \pm 0.02 (947)	0.51 \pm 0.02 (834)	0.48 \pm 0.02 (767)	0.53 \pm 0.02 (847)	0.52 \pm 0.02 (895)	0.44 \pm 0.02 (369)	0.53 \pm 0.01 (4,678)
1996	0.51 \pm 0.02 (1,145)	0.57 \pm 0.02 (1,358)	0.55 \pm 0.02 (906)	0.50 \pm 0.02 (802)	0.48 \pm 0.02 (998)	0.49 \pm 0.02 (571)	0.52 \pm 0.01 (5,502)
1997	0.63 \pm 0.02 (1,358)	0.55 \pm 0.02 (888)	0.65 \pm 0.02 (892)	0.53 \pm 0.02 (831)	0.60 \pm 0.02 (881)	0.45 \pm 0.02 (704)	0.57 \pm 0.01 (5,610)
1998	0.56 \pm 0.02 (1,261)	0.51 \pm 0.02 (900)	0.71 \pm 0.03 (807)	0.56 \pm 0.02 (698)	0.44 \pm 0.02 (856)	0.41 \pm 0.02 (572)	0.53 \pm 0.01 (5,096)
1999	0.56 \pm 0.02 (1,392)	0.55 \pm 0.02 (970)	0.62 \pm 0.02 (867)	0.52 \pm 0.02 (762)	0.49 \pm 0.02 (1,040)	0.46 \pm 0.02 (647)	0.54 \pm 0.01 (5,704)
2000	0.53 \pm 0.01 (1,322)	0.55 \pm 0.02 (886)	0.69 \pm 0.02 (1,035)	0.46 \pm 0.02 (811)	0.43 \pm 0.01 (961)	0.36 \pm 0.02 (638)	0.51 \pm 0.01 (5,655)
2001	0.55 \pm 0.02 (1,060)	0.65 \pm 0.02 (1,012)	0.76 \pm 0.02 (986)	0.59 \pm 0.02 (670)	0.62 \pm 0.02 (958)	0.50 \pm 0.02 (654)	0.62 \pm 0.01 (5,368)
2002	0.55 \pm 0.02 (898)	0.60 \pm 0.02 (879)	0.70 \pm 0.02 (776)	0.60 \pm 0.03 (578)	0.52 \pm 0.02 (883)	0.42 \pm 0.02 (693)	0.56 \pm 0.01 (4,726)
2003	0.59 \pm 0.02 (943)	0.63 \pm 0.02 (825)	0.71 \pm 0.02 (831)	0.69 \pm 0.03 (572)	0.46 \pm 0.02 (711)	0.45 \pm 0.02 (649)	0.59 \pm 0.01 (4,545)
2004	0.50 \pm 0.02 (803)	0.54 \pm 0.02 (885)	0.58 \pm 0.02 (700)	0.57 \pm 0.03 (540)	0.39 \pm 0.02 (744)	0.41 \pm 0.02 (666)	0.49 \pm 0.01 (4,352)
2005	0.51 \pm 0.02 (798)	0.57 \pm 0.02 (907)	0.57 \pm 0.02 (804)	0.46 \pm 0.02 (515)	0.42 \pm 0.02 (706)	0.47 \pm 0.02 (570)	0.51 \pm 0.01 (4,303)

Table 9. Region gobbling by hunt for cooperating wild turkey hunters in Virginia.

Year	Gobblers Heard/Hunt \pm SE (n)						
	Tidewater	Southwest	Western Piedmont	Eastern Piedmont	Central Mountain	Northern	State
1991	1.64 \pm 0.06 (912)	1.27 \pm 0.05 (795)	1.07 \pm 0.04 (814)	1.13 \pm 0.05 (564)	1.15 \pm 0.05 (927)	0.90 \pm 0.06 (445)	1.23 \pm 0.02 (4,459)
1992	1.61 \pm 0.05 (1170)	1.53 \pm 0.05 (974)	1.32 \pm 0.05 (816)	1.28 \pm 0.05 (764)	1.55 \pm 0.09 (838)	1.08 \pm 0.07 (392)	1.45 \pm 0.03 (5,031)
1993	1.83 \pm 0.06 (1091)	1.17 \pm 0.05 (736)	1.29 \pm 0.07 (632)	1.10 \pm 0.04 (748)	1.22 \pm 0.05 (754)	1.30 \pm 0.10 (311)	1.37 \pm 0.02 (4,316)
1994	1.28 \pm 0.05 (897)	1.09 \pm 0.05 (643)	1.19 \pm 0.06 (590)	1.28 \pm 0.06 (758)	1.26 \pm 0.05 (741)	1.39 \pm 0.10 (333)	1.24 \pm 0.02 (4,018)
1995	1.99 \pm 0.06 (947)	1.74 \pm 0.06 (834)	1.58 \pm 0.05 (767)	1.52 \pm 0.05 (847)	1.82 \pm 0.06 (895)	1.52 \pm 0.08 (369)	1.72 \pm 0.03 (4,678)
1996	1.67 \pm 0.05 (1,145)	1.91 \pm 0.06 (1,037)	1.69 \pm 0.06 (1527)	1.45 \pm 0.06 (1165)	1.71 \pm 0.06 (998)	1.61 \pm 0.07 (571)	1.68 \pm 0.02 (5,502)
1997	2.10 \pm 0.06 (1,358)	1.81 \pm 0.06 (888)	2.0 \pm 0.06 (892)	1.48 \pm 0.05 (831)	2.16 \pm 0.07 (881)	1.58 \pm 0.06 (704)	1.88 \pm 0.02 (5,584)
1998	1.77 \pm 0.05 (1,261)	1.82 \pm 0.06 (900)	2.12 \pm 0.07 (807)	1.64 \pm 0.07 (698)	1.61 \pm 0.06 (856)	1.44 \pm 0.07 (572)	1.70 \pm 0.03 (5,096)
1999	1.78 \pm 0.05 (1,392)	1.96 \pm 0.06 (970)	1.91 \pm 0.06 (867)	1.57 \pm 0.05 (762)	1.78 \pm 0.05 (1,040)	1.53 \pm 0.06 (647)	1.77 \pm 0.02 (5,704)
2000	1.67 \pm 0.04 (1,322)	1.92 \pm 0.06 (886)	2.28 \pm 0.06 (1,035)	1.43 \pm 0.06 (811)	1.58 \pm 0.05 (961)	1.19 \pm 0.05 (638)	1.72 \pm 0.02 (5,645)
2001	1.75 \pm 0.05 (1,055)	2.31 \pm 0.08 (1,012)	2.44 \pm 0.07 (986)	1.84 \pm 0.07 (670)	2.32 \pm 0.07 (958)	1.64 \pm 0.07 (654)	2.08 \pm 0.03 (5,368)
2002	1.89 \pm 0.06 (896)	2.17 \pm 0.07 (879)	2.23 \pm 0.07 (776)	1.71 \pm 0.07 (578)	2.00 \pm 0.07 (883)	1.32 \pm 0.06 (693)	1.91 \pm 0.03 (4,708)
2003	1.94 \pm 0.06 (943)	2.14 \pm 0.07 (825)	2.24 \pm 0.07 (831)	2.02 \pm 0.08 (572)	1.71 \pm 0.07 (711)	1.50 \pm 0.06 (649)	1.96 \pm 0.03 (4,545)
2004	1.79 \pm 0.08 (802)	1.94 \pm 0.07 (885)	1.86 \pm 0.07 (700)	1.79 \pm 0.08 (540)	1.50 \pm 0.06 (744)	1.34 \pm 0.07 (666)	1.70 \pm 0.03 (4,352)
2005	1.69 \pm 0.06 (798)	2.09 \pm 0.07 (907)	1.82 \pm 0.06 (804)	1.39 \pm 0.07 (515)	1.52 \pm 0.06 (706)	1.48 \pm 0.07 (570)	1.70 \pm 0.03 (4,303)

Table 10. Region gobbling by week during 2004 for cooperating wild turkey hunters in Virginia.

Date	Gobblers Heard/Hour \pm SE						
	Tidewater	Southwest	(n) Western Piedmont	Eastern Piedmont	Central Mountain	Northern	State
Opening Day	0.52 ± 0.06 (54)	0.65 ± 0.06 (60)	0.44 ± 0.06 (52)	0.26 ± 0.05 (32)	0.60 ± 0.07 (45)	0.65 ± 0.10 (35)	0.54 ± 0.03 (278)
Week 1	0.55 ± 0.05 (201)	0.75 ± 0.04 (204)	0.56 ± 0.04 (163)	0.40 ± 0.05 (129)	0.48 ± 0.04 (156)	0.47 ± 0.04 (176)	0.56 ± 0.02 (1,032)
Week 2	0.71 ± 0.05 (153)	0.70 ± 0.04 (186)	0.76 ± 0.06 (173)	0.57 ± 0.06 (99)	0.53 ± 0.04 (160)	0.53 ± 0.05 (152)	0.64 ± 0.02 (900)
Week 3	0.54 ± 0.04 (129)	0.48 ± 0.05 (135)	0.57 ± 0.04 (137)	0.50 ± 0.06 (83)	0.46 ± 0.05 (98)	0.45 ± 0.05 (84)	0.51 ± 0.02 (667)
Week 4	0.42 ± 0.05 (132)	0.39 ± 0.04 (170)	0.54 ± 0.05 (133)	0.48 ± 0.07 (87)	0.34 ± 0.04 (131)	0.43 ± 0.05 (87)	0.42 ± 0.02 (740)
Week 5	0.35 ± 0.04 (126)	0.50 ± 0.04 (145)	0.40 ± 0.05 (108)	0.46 ± 0.05 (81)	0.24 ± 0.03 (112)	0.39 ± 0.05 (89)	0.39 ± 0.02 (662)

Table 11. Statewide hen observations by hunt for cooperating wild turkey hunters in Virginia.

Year	Average/Hunt		
	Hens Heard	Hens Seen	Hens Called In
1991	0.36 \pm 0.01	0.44 \pm 0.02	0.13 \pm 0.01
1992	0.46 \pm 0.01	0.47 \pm 0.02	0.13 \pm 0.07
1993	0.39 \pm 0.02	0.44 \pm 0.02	0.12 \pm 0.01
1994	0.46 \pm 0.02	0.54 \pm 0.02	0.15 \pm 0.01
1995	0.56 \pm 0.02	0.55 \pm 0.02	0.16 \pm 0.01
1996	0.66 \pm 0.02	0.78 \pm 0.02	0.22 \pm 0.01
1997	0.62 \pm 0.02	0.74 \pm 0.02	0.19 \pm 0.01
1998	0.57 \pm 0.02	0.71 \pm 0.02	0.17 \pm 0.01
1999	0.58 \pm 0.02	0.70 \pm 0.02	0.18 \pm 0.01
2000	0.57 \pm 0.02	0.76 \pm 0.02	0.19 \pm 0.01
2001	0.71 \pm 0.02	0.73 \pm 0.02	0.19 \pm 0.01
2002	0.72 \pm 0.02	0.89 \pm 0.02	0.22 \pm 0.01
2003	0.56 \pm 0.02	0.74 \pm 0.02	0.19 \pm 0.01
2004	0.61 \pm 0.02	0.82 \pm 0.03	0.22 \pm 0.01
2005	0.69 \pm 0.02	0.95 \pm 0.03	0.24 \pm 0.01

Table 12. Wild turkey hens seen per hunt by cooperating wild turkey hunters in Virginia.

Year	Hens Seen/Hunt						
	Day 1	Week 1	Week 2	Week 3	Week 4	Week 5	Season
1992	0.70 ± 0.08 (377)	0.58 ± 0.03 (1,416)	0.44 ± 0.03 (1,092)	0.40 ± 0.04 (632)	0.32 ± 0.03 (854)	0.45 ± 0.04 (660)	0.47 ± 0.02 (5,031)
1993	0.63 ± 0.08 (310)	0.64 ± 0.05 (1,127)	0.41 ± 0.03 (793)	0.36 ± 0.03 (793)	0.28 ± 0.03 (499)	0.29 ± 0.03 (499)	0.44 ± 0.02 (4,316)
1994	0.79 ± 0.11 (266)	0.70 ± 0.05 (1,115)	0.53 ± 0.03 (879)	0.40 ± 0.04 (591)	0.40 ± 0.04 (625)	0.40 ± 0.04 (542)	0.54 ± 0.02 (4,018)
1995	1.0 ± 0.10 (344)	0.65 ± 0.04 (1,363)	0.50 ± 0.04 (1,018)	0.44 ± 0.04 (700)	0.44 ± 0.04 (692)	0.39 ± 0.04 (561)	0.55 ± 0.02 (4,678)
1996	1.26 ± 0.13 (378)	1.02 ± 0.06 (1,462)	0.80 ± 0.05 (1,182)	0.62 ± 0.04 (982)	0.56 ± 0.04 (824)	0.48 ± 0.04 (674)	0.78 ± 0.02 (5,502)
1997	1.19 ± 0.12 (401)	0.90 ± 0.05 (1,476)	0.75 ± 0.04 (1,131)	0.61 ± 0.04 (948)	0.59 ± 0.05 (849)	0.54 ± 0.04 (805)	0.74 ± 0.02 (5,610)
1998	1.12 ± 0.10 (394)	0.89 ± 0.05 (1,480)	0.69 ± 0.04 (1,101)	0.56 ± 0.05 (808)	0.45 ± 0.04 (716)	0.57 ± 0.05 (597)	0.71 ± 0.02 (5,096)
1999	1.12 ± 0.12 (413)	0.87 ± 0.04 (1,640)	0.68 ± 0.04 (1,150)	0.52 ± 0.03 (996)	0.53 ± 0.04 (804)	0.48 ± 0.04 (701)	0.70 ± 0.02 (5,570)
2000	1.21 ± 0.13 (364)	0.96 ± 0.05 (1,393)	0.79 ± 0.05 (1,092)	0.69 ± 0.04 (1,001)	0.56 ± 0.04 (976)	0.41 ± 0.03 (829)	0.76 ± 0.02 (5,655)
2001	1.14 ± 0.09 (363)	0.83 ± 0.04 (1,355)	0.75 ± 0.04 (1,138)	0.65 ± 0.05 (1,007)	0.60 ± 0.04 (866)	0.57 ± 0.05 (639)	0.73 ± 0.02 (5,368)
2002	1.51 ± 0.15 (324)	1.02 ± 0.05 (1,388)	0.92 ± 0.05 (915)	0.69 ± 0.05 (816)	0.71 ± 0.05 (734)	0.67 ± 0.07 (549)	0.89 ± 0.02 (4,726)
2003	1.00 ± 0.12 (293)	1.01 ± 0.05 (1,172)	0.72 ± 0.05 (1,004)	0.60 ± 0.04 (855)	0.54 ± 0.05 (600)	0.55 ± 0.05 (621)	0.75 ± 0.02 (4,545)
2004	1.42 ± 0.20 (308)	1.06 ± 0.07 (1,013)	0.74 ± 0.05 (975)	0.74 ± 0.06 (748)	0.57 ± 0.05 (661)	0.55 ± 0.05 (603)	0.83 ± 0.03 (4,352)
2005	1.65 ± 0.20 (278)	1.20 ± 0.07 (1,032)	0.96 ± 0.05 (900)	0.85 ± 0.06 (667)	0.63 ± 0.05 (740)	1.38 ± 0.05 (662)	0.95 ± 0.03 (4,303)

Table 13. Wild turkey hens called per hunt by cooperating wild turkey hunters in Virginia.

Year	Hens Called In/Hunt						
	Day 1	Week 1	Week 2	Week 3	Week 4	Week 5	Season
1992	0.21 ± 0.04 (264)	0.15 ± 0.02 (1,416)	0.12 ± 0.01 (1,092)	0.09 ± 0.02 (632)	0.09 ± 0.01 (854)	0.15 ± 0.02 (660)	0.13 ± 0.01 (5,031)
1993	0.18 ± 0.04 (310)	0.18 ± 0.02 (1,127)	0.10 ± 0.02 (936)	0.11 ± 0.02 (793)	0.08 ± 0.01 (651)	0.10 ± 0.02 (499)	0.12 ± 0.01 (4,316)
1994	0.25 ± 0.05 (266)	0.21 ± 0.02 (1,115)	0.12 ± 0.02 (879)	0.10 ± 0.02 (591)	0.11 ± 0.02 (625)	0.12 ± 0.02 (542)	0.15 ± 0.01 (4,018)
1995	0.27 ± 0.04 (344)	0.18 ± 0.02 (1,363)	0.17 ± 0.02 (1,018)	0.12 ± 0.02 (700)	0.11 ± 0.01 (692)	0.14 ± 0.02 (561)	0.16 ± 0.01 (4,678)
1996	0.38 ± 0.07 (378)	0.28 ± 0.02 (1,463)	0.23 ± 0.02 (1,182)	0.17 ± 0.02 (982)	0.17 ± 0.02 (824)	0.11 ± 0.02 (674)	0.22 ± 0.01 (5,502)
1997	0.27 ± 0.05 (401)	0.22 ± 0.02 (1,476)	0.17 ± 0.02 (1,131)	0.17 ± 0.04 (948)	0.15 ± 0.02 (849)	0.15 ± 0.02 (849)	0.19 ± 0.02 (5,610)
1998	0.28 ± 0.04 (394)	0.21 ± 0.02 (1,480)	0.17 ± 0.02 (1,101)	0.13 ± 0.02 (808)	0.15 ± 0.02 (716)	0.13 ± 0.02 (597)	0.18 ± 0.01 (5,096)
1999	0.35 ± 0.05 (413)	0.20 ± 0.02 (1,640)	0.17 ± 0.02 (1,150)	0.16 ± 0.02 (996)	0.15 ± 0.02 (804)	0.15 ± 0.02 (701)	0.18 ± 0.01 (5,704)
2000	0.31 ± 0.05 (364)	0.26 ± 0.03 (1,393)	0.18 ± 0.02 (1,092)	0.16 ± 0.02 (1,001)	0.13 ± 0.02 (976)	0.13 ± 0.02 (829)	0.19 ± 0.01 (5,655)
2001	0.39 ± 0.04 (363)	0.19 ± 0.02 (1,355)	0.20 ± 0.02 (1,138)	0.17 ± 0.02 (1,007)	0.20 ± 0.02 (866)	0.12 ± 0.02 (639)	0.19 ± 0.01 (5,368)
2002	0.39 ± 0.07 (324)	0.26 ± 0.02 (1,388)	0.23 ± 0.02 (915)	0.15 ± 0.02 (816)	0.19 ± 0.02 (734)	0.17 ± 0.02 (549)	0.22 ± 0.01 (4,726)
2003	0.25 ± 0.06 (293)	0.25 ± 0.02 (1,172)	0.18 ± 0.02 (1,004)	0.17 ± 0.02 (855)	0.14 ± 0.02 (600)	0.15 ± 0.02 (621)	0.19 ± 0.01 (4,545)
2004	0.44 ± 0.09 (308)	0.26 ± 0.03 (1,013)	0.20 ± 0.02 (975)	0.24 ± 0.04 (748)	0.12 ± 0.02 (661)	0.17 ± 0.03 (603)	0.22 ± 0.01 (4,352)
2005	0.43 ± 0.09 (278)	0.31 ± 0.03 (1,032)	0.23 ± 0.02 (900)	0.20 ± 0.02 (667)	0.17 ± 0.02 (740)	0.16 ± 0.02 (662)	0.24 ± 0.01 (4,303)

Table 14. Flushing rates of nesting wild turkey hens by cooperating wild turkey hunters in Virginia.

Year	Hens flushed/100 hrs hunting (number flushed)						Season
	Day 1	Week 1	Week 2	Week 3	Week 4	Week 5	
1999	0.56 (9)	0.48 (27)	0.38 (14)	0.39 (12)	0.49 (12)	0.64 (14)	0.47 (88)
2000	0.44 (6)	0.25 (12)	0.19 (7)	0.71 (24)	0.54 (17)	1.06 (27)	0.42 (81)
2001	0.27 (4)	0.62 (29)	0.39 (15)	0.58 (19)	0.79 (22)	0.46 (9)	0.55 (98)
2002	0.39 (5)	0.25 (12)	0.70 (22)	0.67 (18)	0.58 (14)	0.41 (7)	0.49 (78)
2003	0 (0)	0.35 (14)	0.50 (17)	0.64 (18)	0.63 (12)	0.66 (13)	0.49 (74)
2004	0.08 (1)	0.18 (6)	0.15 (5)	0.46 (11)	0.39 (9)	0.28 (6)	0.26 (74)
2005	0.93 (8)	0.28 (8)	0.20 (5)	0.98 (18)	0.94 (23)	0.74 (16)	0.61 (78)

Table 15. Interference reported by cooperating wild turkey hunters in Virginia.

Year	Cooperators(<i>n</i>)	% w/ Interference	% Hunts Disturbed	Avg. Hunters seen
1987	161	50	10	
1988	230	54	9	
1989	251	47	8	
1990	319	60	11	5.5
1991	408	60	8.1	5.6
1992	430	52	9.0	3.7
1993	361	47	3.8	4.6
1994	341	36	2.8	4.0
1995	401	48	8.2	4.5
1996	481	39	3.3	4.5
1997	486	42	3.6	4.4
1998	455	35	3.2	4.5
1999	500	38	5.2	4.3
2000	441	38	2.9	3.9
2001	433	38	6.2	4.1
2002	380	39	5.9	4.0
2003	372	40	6.3	3.9
2004	357	40	3.1	4.7
2005	354	37	—	4.0

^a Average was based on cooperators who had experienced interference.

Table 16. Dogs observed during spring gobbler season by cooperating wild turkey hunters in Virginia.

Year	Percent Cooperators Seeing Dogs	Average Number Hunts Disturbed by Dog
1992	55	2.8 ± 0.2 (238)
1993	55	2.7 ± 0.1 (192)
1994	52	2.9 ± 0.2 (168)
1995	53	2.8 ± 0.2 (196)
1996	52	2.0 ± 0.2 (236)
1997	49	2.4 ± 0.1 (223)
1998	46	2.6 ± 0.2 (201)
1999	45	2.6 ± 0.2 (219)
2000	44	2.7 ± 0.3 (192)
2001	42	2.8 ± 0.1 (170)
2002	42	—
2003	46	—
2004	41	—
2005	40	—

^a Average was based only on those cooperators that observed dogs.

Table 17. Violations observed during spring gobbler seasons by cooperating wild turkey hunters in Virginia.

Year	Tres- pass	Pre- Season	Sunday Hunt	Before Hours	After Hours	Over Limit	Baiting	Killing Hens	Other	Total (<i>n</i>)
1987	21	17	10	7	7	7	7	7	7	
1988	43	7	5	14	0	5	5	12	2	42
1989	53	4	0	17	6	11	2	7	0	53
1990	54	6	4	6	0	7	3	3	13	68
1991	48	12	--	10	--	13	0	7	11	87
1992	49	15	--	9	--	14	--	4	9	148
1993	70	12	--	12	--	21	--	6	13	134
1994	46	14	--	4	--	14	--	3	10	91
1995	79	30	--	23	--	30	--	7	23	192
1996	61	23	--	18	--	26	--	8	19	155
1997	82	13	--	11	--	25	--	2	22	155
1998	74	27	--	19	--	25	--	4	23	172
1999	64	19	--	9	--	21	--	2	27	142
2000	61	18	--	11	--	19	--	3	16	128
2001	61	16	--	7	--	14	--	0	12	110
2002	61	4	--	11	--	20	--	1	8	104
2003	61	6	--	4	--	7	--	2	13	93
2004	36	4	--	6	--	7	--	1	7	61
2005	40	4	--	3	--	7	--	1	11	66

Appendix A. Cooperator comments and remarks with cooperator ID number in parentheses. Comments without name and address were not included.

WEATHER

Bad: 6710, 6586, 7184, 7208

Good: 7148, 1344, 3331, 4892, 6838

Too Warm: 7213, 5177

Cool: 7970, 7345, 2217, 5239, 8041, 6070, 8300, 5614, 8920, 3344, 6338, 1120, 0077, 6998, 5339, 7688, 1084, 3505, 7045, 8997, 0349, 6056, 3508, 0732, 2571, 6031, 8299, 5186, 1927, 3241, 7946, 0422, 6406, 7269, 4768, 6975, 2975

Dry: 4952

Late spring: 1339, 2592

GOBBLING

Very little/none: 7970, 2849, 8239, 6302, 5468, 2217, 0776, 5045, 5196, 6070, 9777, 3244, 8300, 5614, 4742, 4731, 2568, 1120, 1339, 2592, 8085, 2897, 6586, 0244, 8828, 8436, 3416, 5339, 4499, 1084, 7045, 6429, 1627, 6243, 9374, 6056, 0365, 0732, 2571, 7213, 3574, 6031, 1927, 0246, 0763, 6164, 4340, 5409, 4768, 7937, 3458, 5177, 0573

Good gobbling: 8854, 5615, 8646, 2997, 6338, 8511, 8368, 0864, 7825, 9024, 3331, 4892

Did not respond or hard to call in: 7827, 8041, 6164, 7868, 6406, 5337, 2257

Gobbled on roost then not on ground: 4404, 6164, 7868, 47687131, 9851

Gobbled later in season: 5917, 2338, 1023, 6164, 3513

Better gobbling after season: 5991

Gobbled early part of season: 6538, 9880

Less gobbling when foggy: 9638

Sometimes did not gobble on roost: 9683

POPULATION

Lots of jakes: 1649, 4644, 4952, 8041, 8646, 3058, 8300, 8189, 5561, 0346, 5367, 5917, 4877, 0864, 0732, 3574, 5939, 3164, 0422, 7269

Few or no jakes: 2337, 5186, 6975, 8760

Not many 2 year old birds: 9602, 0455, 0332, 9417, 9984, 6031, 3164, 1755, 7269

Large number of hens: 5304, 5045, 4731, 0273, 0332

Too many hens: 4404, 0077, 6429

Very few or not many hens: 8828, 6975

Population low: 0776, 3058, 2568, 2273, 1852, 8436, 6174, 2803, 1627, 0365, 5186, 1927, 3241, 5599, 7148, 9713, 1023, 4340, 5409, 7921, 0573, 3771, 2803, 6631, 5337, 2339, 9336, 6975, 7970

Population good: 5615, 8511, 8368, 7825, 3331, 4892, 7945, 6838, 4833

Piedmont population pretty good: 1627

Gobblers were with hens: 4237, 8041, 9602, 8920, 3344, 9552, 3708, 0077, 6429, 1755

Ganged up into May: 6239, 2452

SURVEY RECOMMENDATIONS

Why don't you have a chart to age a turkey by the spur length anymore? 9161

Need column for Jakes: 8828, 0077

Need high and low temperature field: 6779

Include fog & number of jakes seen and called in: 3054

Show time as ½ hour before sunrise unless you want to know when we entered woods: 7130

Need column for unidentified birds seen or heard: 6031

Question 9 needs a block for unreported kills: 6031

Would like forms in e-mail or PDF format: 1129

Include in survey prior year kill for each county: 8602

Need ID for jakes & toms – use gobbling codes, break weather into time periods: 6031

LIKED SEASON OR NOT

Enjoyed the season: 7970, 8854, 8646, 3473, 9851, 8920, 5864, 8189, 1733, 9417, 8732, 5557, 4384, 3505, 6838, 4465, 1129, 0864, 4455, 4833, 7148, 5034, 0422, 3353, 3331, 4892

Frustrating & discouraging: 2180, 8041, 5196, 3244, 0222, 0244, 6174, 1056, 5939, 6406, 2422, 9336, 2257, 2803

Bad season: 2803

POACHERS AND HUNTER PRESSURE

Too many inexperienced and dangerous hunters: 6031

Not many hunters: 9161

Lots of hunters: 7345, 5239, 8766, 1158, 4892

Trespassers interfered: 7827, 5196, 6031

Poacher shot turkey from road and left it: 0472

ATV hunters are a problem: 1002, 7946

Another hunter slipped in and shot bird I was working: 5679

Easier to call from hens than corn piles in Scott County: 2452

Father taught 16 year old son to trespass, poach and hunt without a license. Son had to see father in handcuffs and taken to jail. My hope is judge will require youth to retake hunter education: 0472

Need regs to abolish all wildlife feeding: 4791, 8732

Need more wardens: 0536, 3218, 6975

Need wardens in Pittsylvania County that will do something: 4404

Need stiffer penalties for violators: 8828

Need more expedient way to contact wardens: 8828

Wardens need to do better job cracking down on hunters killing over the limit: 2257

DOGS

Free roaming dogs are a problem: 0611, 1906, 3771, 6220, 1302, 8920, 2897, 5339, 8994, 9984, 7394, 6031, 1927, 1002, 9713, 3734, 4892, 3513, 4555, 8113

Dogs came in to decoy: 3748, 6031

Dog came to gobbling turkey: 9683

Dogs should be in control of owner or in kennel in spring: 1507

Hunting dogs should not be loose during April, May and June: 4555

LENGTH OF DAY HUNTING AND SUNDAY

Yes to Sunday hunting: 0926, 3083, 0332, 0824, 6998, 9159, 0349, 3218, 1344, 3734

No to Sunday hunting: 6710, 1529, 2578, 2568, 8828, 6927, 4499, 6231, 6031, 2339, 4555, 6975

Likes all day hunting: 2997, 4404, 8920, 5561, 9119, 6998, 6311, 5339, 3505, 8680, 5289, 3458

No to all day hunting: 1649, 1529, 2578, 2147, 2568, 0864, 5409, 4555, 6975

Would like all day all season: 3218, 3734

All day good idea but should be last 2 weeks: 6951

All day should be first 2 weeks: 0926

Would like to see all day hunting first 3 weeks: 3353

Majority of participants in last years survey didn't like all day season why did the VDGIF not listen: 1445

End evening shooting by 7 p.m. to prevent roost shooting: 7445

Prefers all day, all season or not have it at all, should be first 3 weeks not when turkeys are on nest: 9846

Make season hours until 4 p.m. not sunset: 0349

Make season hours 1 hour before sunset: 6031

SEASON DATES

Open 1 week earlier: 5321

Season lengths and limits OK: 9119, 2193, 6031

Season too early west of Blue Ridge: 9315, 3186

Season should be split like deer season: 9315

Make East and West seasons different: 3186

Season too early: 5614, 4404, 4742, 3344

Season too late: 6702, 3083, 7184, 1166, 3505, 5186

Have season first Saturday in April to first Saturday in May: 8718

Start a week later and stay in later: 3186

Extend 1 week at the end: 8602, 7688

Open earlier at least first Saturday in April: 4559

Cut season back for several years: 7921

FALL SEASON

Make hens only to reduce the population: 5304

Start fall season on Saturday: 6031

Shorten: 9160, 6631, 4833, 6590, 2422, 6975

Do away with during deer season: 1852

Keep: 4499

Need fall archery season on Eastern Shore: 9846

Eliminate or greatly reduce fall hen season: 4340

No fall turkey hunting except with shotguns with present restrictions: 2568

Likes closing turkey season during deer season: 4892

LIMITS AND LICENSE

Need more tags: 0586

Cut bag limit to 1: 5409

Reduce bag limit: 8085, 2339

Limit is good: 2147, 8680, 6031, 9119, 2193

Should not kill jakes in spring: 2578

Cut limit back to 2: 4833, 4520, 6590, 5289, 6951, 0365, 1529, 2578, 8718, 0365, 8602, 7509, 6975

Limit should be 1 in spring and 1 in fall: 2337, 3708

Should have only 1 tag for fall, 2 or 3 in spring is okay: 6631

Three in spring is too many do 2 in spring and 1 in fall: 2900

Out of state license should only be 1 tag with option to buy second tag: 1316

Out of state license should not yield 3 spring gobbler tags: 5289

Doest not like new tagging system it gives illegal hunters opportunity to shoot more turkeys over the limit: 6951

Need more hen tags for fall and make only hens legal in fall: 4892

Limit to 1 hen tag and hens only in the fall: 3331

Tenants should buy license: 3316, 0472

Should be \$15 fee to hunt spring turkeys: 8708

Out of state hunters should have to purchase each individual turkey tag with a 2 turkey limit: 1645

Need bow season 1 week prior to gun season: 0246

WEAPONS

Do not allow rifles in spring: 4952, 1529, 4333, 2578, 8964, 2817, 9552, 6373, 9327, 8511, 8718, 0332, 0824, 1166, 1645, 9851, 9159, 8239, 7833, 1002, 8864

No rifles allowed for hunting turkeys: 1649, 6069, 5593, 8300, 9851, 2337, 2568, 9160, 9119, 2193, 1171, 0349, 0864, 6031, 7946, 5321, 3331, 4892, 3458

Rifles should be allowed: 2050, 2339

Do not allow shot larger than size 4: 3458

Combination rifle/shotgun should be allowed: 6289

No muzzleloaders: 1171

EXPERIENCES

Saw two crippled hens: 5304

Saw a bear: 4644, 8511, 2338

Saw white doe with brown head: 2452

Bird had 3 spurs on each leg: 3771

Saw piebald deer: 4066

Saw feral pigs 3 grown with 15 little ones in Culpepper: 8189

Called in white hen: 9851

Saw hen with beard: 9454, 0390, 6406

Saw hen get bred and walk away from flock: 4877

Crows ran off gobbler: 9161

Owl knocked decoy over: 3748

Called in coyote: 3316, 7184

Heard as many coyotes as toms: 6285

Saw coyote: 4952, 4833

Lots of coyotes: 8300, 7045, 1627, 5289, 9024

Called in bobcat: 3303, 6429

Bobcat attacked me: 4597

Fox chased off turkeys: 6702

Fox, raccoon and deer spooked turkeys: 0346

Black phase coyote spooked gobbler: 9851

Bobcat stalked turkey: 4877

Eagle scared birds: 9383, 9336

Deer spooked: 6243

OPINIONS

Need turkey stocked in certain counties: 5239, 0536

Most of Prince William County is lost to development: 1339

Should not shoot short beard birds: 3983

Clear cutting is not good for turkeys: 1645, 2803

Need more state land: 2803

Powhatan WMA fields needed to be mowed before start of season: 9646

Spring turkey permit might be good idea for WMA because they are getting dangerous with lots of hunting pressure: 9646

Hen to gobbler ratio needs to be 1 to 1: 9397

Federal land needs habitat improvements for all species: 5667

Why do we have 3 limit and evening hunting when population is down: 3771

Youth day a great idea: 3266, 4833, 3458

Make youth day all day: 5239

Make youth day two Saturday's: 9851

Start program to get kids involved: 2339

Need more youth days: 9327, 6998

Open 1 week earlier for youth: 4833

Youth day was a wash out it rained all day: 4003

Do not allow decoys: 1529, 9119, 6951

Allow decoys only for bow hunters and filming: 1344

NESTING

Found nest with eggs destroyed: 3316

April 30 nest had 15 eggs: 6710

April 29 hen on nest of 11 eggs: 8041

May 5 flushed hen from nest: 2997

May 10 nest had 11 eggs: 3058

May 7 nest had 13 eggs: 8189

One nest had 22 eggs and 1 had 12: 9981

Most hens were nesting: 8760

THANK YOU

Thanks Gary Norman for good work: 8084, 2997, 3473, 0536, 2337, 5864, 2592, 8732, 5557, 6838, 1129, 6031, 8239, 6631, 4833, 1927, 5599, 0246, 7868, 0422, 5337, 3331, 4892, 6975, 2198, 5286, 5615, 8646, 6927, 3458

Thanks for survey: 2738, 3353, 0573

Thanks VDGIF & NWTF: 3458

Good job by VDGIF: 2147, 3473, 6311, 4833

Thanks for opportunity to call for others after filling tags: 8511